5: Schwimmer E-4,5 (1966-1967) 1973
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making salt were described to me, the housewife depends mainly on trade salt. Meals never consist of more than one course. Plates, forks and spoons are owned by all households but people do not always use them. While boiling is the most common way of preparing food, bananas, yams and breadfruit are usually roasted. Meat is often preserved by daily smoking, sometimes for long periods. There is a rule against eating meat 'in lent' and this is kept very strictly, but probably for traditional religious reasons to be discussed later. The main drink with meals is a soup consisting of the water in which the vegetables and herbs were cooked.

*Foraging.* A good deal of plant and animal food is obtained from foraging, especially in the tropical rain forest which covers most of the Northern District. Among foraged animal foods I would mention especially grubs, frogs, snails, rats, bush eggs and lice. Foraged plant foods are especially valued during the dry season when roots, leaves and fern fronds may make up part of a meal. Savoury herbs and leaves, however, are collected at all times of the year. Some food plants, though growing in the forest, are owned by individuals so that the gathering of these plants may be better described as harvesting than collecting. The most important are the *tauga* and *puga* nut, sago, breadfruit, wild fig, and fruiting pandanus.[4]

*Hunting.* According to Waddell and Krinks, about two man-hours weekly are spent on hunting (3.7 hours by men and 0.3 hours by women). Hunting patterns on the Mount Lamington foothills differ widely from those on the alluvial plains where kunai grass is widespread. On the foothills, there is hunting in reverted gardens and in very limited areas of virgin bush. The usual quarry consists of small marsupials and birds. If a pig is encountered, it is invariably a village pig whose owner has a claim to the carcase. The game population was virtually exterminated after the introduction of guns in the 1950s. In the kunai country, on the other hand, hunting land is abundant. The technique is by firing the kunai so that the animals can be shot when they escape. Such a hunt requires a large number of men who ring the burnt-over area. Not only marsupials but also pigs are killed, either by gunfire or by being roasted alive in the kunai grass. By no means all animals killed in the fire are retrieved. Fires tend to get out of hand and to spread over surrounding bush land which then is often covered with kunai grass and so is useless for purposes of cultivation.

*Fishing.* The supply of fish has suffered greatly with the introduction of snorkels after the Second World War, as this equipment enabled the Orokaiva to fish out their rivers almost completely in a very short time. Fish is still an important resource, however, in the lower reaches of the huge rivers which run through the Northern District: Kumusi, Ambogo, Girua, Sambogo, etc. In Inonda, the village studied by Crocombe and Hogbin (1963) and Waddell and Krinks (1968), 3.8 man hours per week are spent on fishing, mostly with spears, and the product is used not only for consumption but also for trade. (Inonda people also trade meat and bush eggs.) Many of the villages near the mountain, such as Sivepe, have very little fish. Apart from a few eels and crabs, the rivers contained a small supply of two-inch-long fishes caught in April with a small hand-net used as a scoop. (See Williams 1930:53 for description.)

*Animal Husbandry.* There are three kinds of domestic livestock: pigs, dogs and fowls. Every man still has one or more small dog which he uses for hunting

pig-lending becomes a simulation, on a minor scale, of the customs of marriage exchange, where a reciprocating pair of groups send back and forth a female marriage partner at intervals of one generation.

This assimilation of domesticated pigs to human members of exchanging social groups is emphasised by much customary behaviour towards these pigs. This behaviour goes beyond co-residence in the same house and the use of kinship terms of reference, but extends to strict taboos of wide range prohibiting the eating of domestic pigs by their rearers.

## 4. *Wild Pigs as Victims*

Williams (1930) describes in detail the techniques that are, or were, used for the hunting of pigs: the use of spears, pig-traps, and the collective burning of *kunai* grass to drive pigs towards their pursuers. I myself witnessed such a burn, in which three villages participated as owners of the burnt-over land (Inonda, Urio, Musou) as well as some hunters from Ajoro. The myths explaining the origin of the various techniques of hunting and of cooking the meat do not enlighten us greatly in the study of exchange, except to confirm a point already made in a previous chapter: the *dema* figure who is remembered as having 'given' a certain technique to mankind, is invariably described in the myth as the first *victim* of that technique. The ritual of killing is a very simple one: it consists in calling out one's clan name before striking the fatal blow. This is supposed to give the hunter the strength (*ivo*) he needs in order to kill. Both killer and victim are thus symbolically identified with a primal ancestor.

The killer of a wild pig is not bound by the same ritual restrictions as the killer of either a man or a domestic pig. Williams states that he found no rule prohibiting a man from eating his personal quarry. Nonetheless, I found that in practice the meat of the wild pig virtually always serves some purpose of exchange-sale, barter or the mediating of social relations. The two wild pigs killed by Inonda men during the hunt to which I have already referred will serve as an example.

Killer A presented his pig to his mother's brother who lives in Ajoro. Killer B presented his quarry to killer A, who is B's brother's wife's brother. A distributed most of the joints to men and women from Inonda (including B), and to two Ajoro men who had returned from the hunt empty-handed, but kept one joint. A's mother's brother kept part of the animal he had been given but distributed the rest of it to his Inonda relatives, including A., as well as several affines. In the end everyone in Inonda had received some meat, but sometimes this meat had gone through several hands. For instance, A's sister did not receive meat from the animal her brother had killed, but from the animal her brother received as a present. Her brother gave several joints to B and it was from one of these joints A's sister was able to eat, because B gave it to his own brother who was A's sister's husband.

After this set of circuitous transactions the fires were lit. I noticed that only some of the meat was boiled but that most of it was smoked for later use, In fact only a fraction of the two slaughtered pigs was eaten that night. The smoked meat was kept for a variety of transactions. In line with the modern trend, these included sale at the market, but there were also traditional prestations, e.g. a gift

5: Schwimmer E-4,5 (1966-1967) 1973
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224 825 571 to a man who had lent an ornament for a recent ceremony. I was told that meat is sometimes kept for 'months' so it can be offered at a feast or used to discharge an obligation. The housewife smokes the meat over the fire every day so that, after a while, it becomes very 'strong'; the 'stronger' it is, the better.

[251] [431] [437] While the economic motivation in the final disposal of the joints is plain enough, it is less easy to understand the elaborate exchanges immediately following the killing. There are no taboos that could explain why these exchanges were made. One might, of course, account for the whole series of gifts in the same way as I accounted for the taro gifts made between close associates: as a means of maintaining a quasi-commensal kind of social relationship. But such an explanation obscures an important difference between gifts of taro and pig meat, namely that gift taro is usually only a small part of the harvest, whereas it appears to be regular practice (even though not supported by taboo) to give [262] away *all* the meat of a pig one has killed. There is a strong, empirically demonstrated, preference for eating pork that has been *given* rather than pork that has been personally killed.

262 The essential difference between taro and pork, as perceived by the Orokaiva, has already been discussed in a previous chapter. The difference is that taro is regarded as a staple food to keep men alive, whereas pork is regarded as a food of special power enabling men to succeed in tasks of great difficulty, in which [778] success is always precarious. Pork has a special power or *ivo*. The reality of this belief is obvious from field observation. Meat-eating arouses in the Orokaiva a mood of extraordinary festivity and gaiety. After meat, he shows an exuberance and excitement Westerners display only when they have drunk a good deal or are 'turned on' by mild drugs. While one can think of biochemical causes for the Orokaiva behaviour, they explain this excitement themselves by referring to the *ivo* or spiritual qualities of meat.

778 262 224 431 773 These beliefs do not, in themselves, explain why it is considered better for meat to be given rather than consumed by the killer. They do, however, carry us back to the myth – already considered in detail – by which Orokaiva explain the origin of human *ivo*. *Ivo* was personified in Pig-man Totoima until his son slew him and cut his body into pieces. These joints, shared out among men, made the people multiply so that men are now spread throughout the world. The important point to note in this myth is that *ivo* did not come from the mere eating of the meat, but from the sharing out, following by the eating. If *ivo* is to be attained, it has to be through the re-enactment of the myth, which means not only the eating but also the sharing out. This sharing out is always done by cutting a pig into the very same joints as those into which the dead Totoima was dissected. Hence pork – whether derived from a wild or a domesticated pig – is magically most effective if it is a gift.

### 5. *Domesticated Pig as Victim*

231 825 Pig meat provided at the more important ceremonies of the Orokaiva comes far more frequently from domesticated than from wild pig. One reason for this is obviously practical: the more important ceremonies require very intricate planning in many spheres. The meat supply, which is a crucial requirement for such ceremonies, cannot be left to chance, though wild pork can usually serve to

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311 standards of subsistence agriculture.[1] Their own property totals 138 acres.

c. Hunting and fishing

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[136] These pursuits add variety ot the diet but provide comparatively little food. Most of the game surviving in the area is small and there are no large fish to be found in the mountain streams. Small marsupials such as the cuscus, bandicoot and, more rarely, the land wallaby, together with flying foxes and birds are the main sources of animal protein. Nets and hunting spears are generally used to catch these animals after they have been flushed out by the hunter's dog. Traps are seldom set for game but we were told this formerly was a more common technique. Snares for the smaller types of animal are often made by boys and one or two of the men. Two members of the sample owned licensed shotguns and these were very effectively and economically used. One of these men would place his services at the disposal of anyone who supplied cartridges for the gun; the other allowed a limited circle of people to use his gun. The guns were frequently used for hunting at night in the dry weather during our survey.

226 Neither of the two forms of concerted hunting common among other Orokaiva (the drive towards a pig net and grassburning, Williams 1930:43) is practised to any extent as there are few wild pigs and little grassland in the area.

Spears and fine-mesh nets are used in local streams to catch eels and the 7 types of small fish found. This task is shared by men and women usually when the water is low during a period of dry weather. They may search for fish with a net along the Sohu River wherever it passes through land held by a member of the village, but the small rock dams built by a man to form pools suitable for the use of the spear are made only where the river passes through his own land.

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[1] This requirement is 2.2 acres per capita. Barrau (1958:75) says that 2.5 to 5 acres per capita are sufficient for this type of agriculture in Melanesia, assuming the average area of garden is 0.25 acres and that the duration of bush fallow ranges from 10 to 20 years. In March 1951, 40 square miles of unrestricted land were considered suitable for resettling 4,500 of the survivors of the recent eruption (Plant 1951:4; Belshaw 1951:9). It was felt that these 5 acres per capita were enough only to meet the immediate requirements of traditional subsistence gardening for the next few years. (It was well-wooded and appeared 'most productive' and easily accessible by road.) Considerable population increases were anticipated.

423 [224] [220] The only local hunting land held by Sivepe people is that held by individuals as gardening land. A villager may hunt or fish on the land held by members of any group in the village and in fact often strays further afield than this 'village land' without attracting the attention of other groups. A man may, without consulting others, invite a kinsman from another village to hunt or join in a fish drive with him but no hunting parties involve the assembly or co-operation of larger groups. A man wishing to hunt on the land of one of his kinsmen in another village would consult his kinsman first.

d. Livestock

235 [231] Apart from the game available to the hunter, there are only 2 sources of fresh meat available, the domestic pig and fowl. Six householders own a total of 15 fowls which were either bred or bought by their owner. They are valued mainly as an asset for times of feasting and only to a limited extent for egg production. They are allowed to run loose in the village during the day but are enclosed in shelters at night for protection against dogs.

231 [241] Like fowls, pigs are fed by women mainly on scraps but they find much of their food by roaming in the bush and grazing in old gardens. They have complete freedom of movement within or outside the village during the day and in some instances only are they housed in pens during the night. As a result, they are a constant threat to gardens which are not thoroughly fenced; their movements are a frequent source of dispute and require the gardener to exercise care in siting his garden and sometimes to devote considerable time waiting there to attack a pig which has been frequenting the area.

[431] [426] Of the 24 pigs or piglets claimed by 7 of the 12 householders, 15 were bred by them and the rest received in gift exchanges; none was inherited. The only longstanding debts admitted or claimed by members of the sample were in terms of pigs.

[146] There is little animal protein in the villagers' diet; some fresh meat and smoked meat or fish is purchased at Saiho market or from vendors travelling to the market - this source of meat seems to be quickly becoming reasonably accessible (E. Waddell: personal communication), but wild pigs - a very important source in many other Orokaiva areas - are rare and the area for hunting restricted. It would be feasible to take steps to modify any lack of animal protein by increasing stock numbers and improving their quality, but this would involve the introduction of new strains and, to maintain any increase or improvements, husbandry techniques would need to be refined.[1] At present parasites take

[CS7] [1] About 50 Berkshire boars were distributed to Village Constables among the groups affected by the Mt Lamington eruption.

may be influenced by proximity to a new area of land it is intended to bring into cultivation.[1]

(iv) Rights to land. The Orokaiva social system is characterised by flexibility in arrangements for group membership and for transmission of rights to land (e.g. through adoption). Inheritance is usually patrilineal[2] and various land rights may be distributed at a number of levels of social segmentation - the clan branch, lineage and individual - the relative significance of each varying with locality and, apparently, population density.[3] Further, more than one descent group may have rights in a single piece of land. In many instances the clan branch functions essentially as a reference group, all land being associated with it. However, it may function as a primary right-holding group for those hunting areas distinct from current garden land, typically the grasslands.[4] Priority rights to garden land are normally vested in the lineage; nevertheless, all such land is ultimately identifiable with individuals who may distribute land (and property) prior to their death not only to their immediate family but also to more distant kin.[5]

This markedly influences the pattern of both exploitation of land and transmission of rights. In the low density areas a number of descent groups often agree to exploit simultaneously an area

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[1] Rimoldi (1966:68) found no evidence of the need for new land as a motive for movement. He considers the major motives to be fear of sorcery, disputes between kin and life-crises. It is nevertheless conceivable that the fear or sorcery or disputes might arise from poor yields from over-cropped garden land, which would require a move in any case.

[2] Women are known to hold land only as a form of trust for their children (Crocombe and Hogbin 1963:75).

[3] We do not know whether any causal relationship exists between these two factors. However, the existence in low density areas of primary forest surplus to current garden needs, plus extensive grassland and mountain areas utilised largely in hunting only, might well account for the responsibility for such land being vested in the larger social group, the clan branch. This group's significance has been eroded in the high density areas, where there is little or no land surplus to present gardening needs.

[4] In the high density areas hunting is frequently confined to garden land and individuals can commonly hunt over land belonging to anyone in the village.

[5] For example, sisters' sons (Crocombe and Hogbin 1963:24).

241 pawpaws, bananas, sugar-cane and edible pitpit (Saccharum edule). No rotations are practised, but a garden may be gradually extended so that the period between initial planting and final abandonment may be as much as two years; plants such as banana and pawpaw may survive longer.

Taro is liable to be adversely affected by a lack of soil moisture during the dry season, and at this time people resort to sago or breadfruit[1] and foraging.[2] Yams and Xanthosoma are also more important at this time, since the former can be stored for many months in specially erected yam houses and the latter can remain in the ground for some time without deteriorating.

[262] In Sivepe, animal protein does not form a regular or quantitatively significant part of the diet. The principal source is the [224] domestic pig, and birds and small marsupials which are hunted. In [226] Inonda and other areas more low-lying than Sivepe, rivers are larger and contribute considerable quantities of fish to the diet, while hunting for pigs, wallabies and other marsupials and birds is also more profitable than in the more densely settled areas.

Since about 1890, new subsistence crops, including sweet potato, manioc, Xanthosoma, corn, pawpaw, sweet banana, pumpkin and water melon have been introduced. The Mt Lamington people claim that [262] yams and sago also are very recent introductions into their area. The fruits are consumed mainly as refreshments, but the vegetables have become important in the diet. Sweet potatoes need drier soils than taro and they mature in about three months. They, with yams and Xanthosoma, are often planted in special gardens, known as 'sera',[3] as distinct from the ordinary taro gardens, called 'pure'. [824] The sago palm is still uncommon in the Mt Lamington area and not everyone is skilled in the extraction of the flour. Its leaves have, however, displaced those of the bamboo as the principal roofing material.

431 (ii) Exchange. The most common transactions are the daily ex-
435 changes of food between the households in any Orokaiva settlement. This may be unprepared, cultivated or forest produce distributed on return from the gardens or it may be freshly cooked food given at the time of the evening meal. People also frequently share food, drink or tobacco while working together or on a journey. They do not record these exchanges and each household is assumed to be in a long-term equilibrium with the others.

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1 Breadfruit is common only in the inland areas.

[824] 2 Particularly for edible leaves and shoots, which are known by the same Orokaiva name (ina) as pitpit.

3 Such gardens are often only roughly cleared and not weeded, thus reducing labour.

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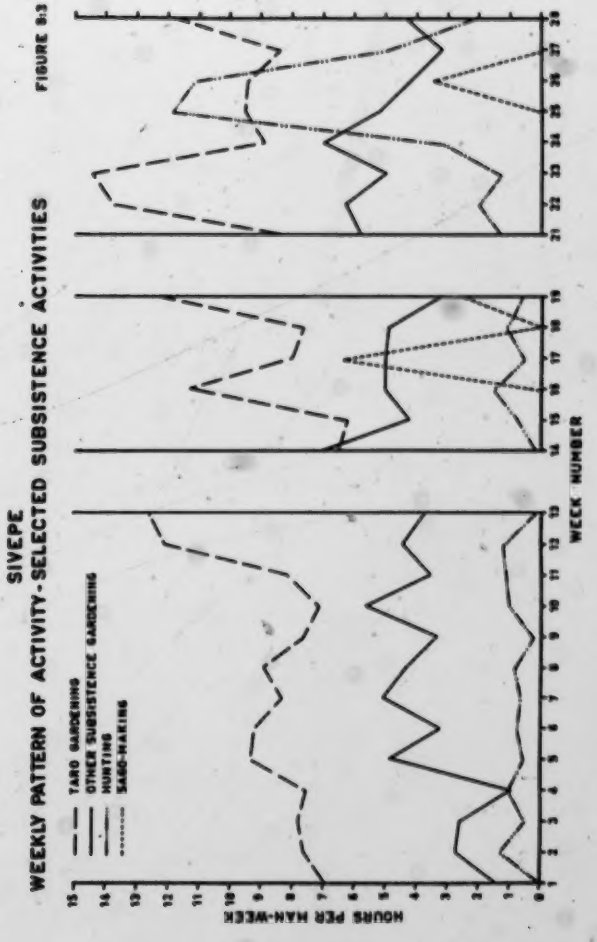


FIGURE 8.3

244 Breadfruit trees grow around the village and in garden areas, some being planted and others self-sown but preserved when garden sites are cleared. All are individually owned. Harvesting is relatively easy, the fruit being removed from the tree with the [262] aid of a knife attached to a long stick. Sago apart, the breadfruit comprises a major element of diet during the dry months.

433 While the inland Orokaiva are essentially food-gardeners - a fact dictated largely by the density of occupation where intensive [224] utilisation of the forest has greatly reduced its plant and animal [512] resources - both hunting and sago-making are of limited importance and occupy 1.8 and 0.4 hours per man-week respectively.

224 Traditionally the Sivepe people claim to have hunted feral pig [136] high on the slopes of Mt Lamington but this has ceased now they 'have too much to do'. No such pigs are found in the bush adjacent to the village but bandicoot, wallaby, cus-cus, flying fox, and a variety of birds are not uncommon. Periodically domestic pigs [411] enter gardens whereupon they are usually hunted out and killed, either by the irate gardener or the owner of the animal. While a spear may be used in the latter case, shotguns are now often used or special hunting parties organised where a net is employed. Use of the two shotguns held in the village is usually confined to the owner and others who contributed to its purchase. Such hunting, with the aid of a torch, is normally done on moonlit nights and is most common in the dry season when flying fox are attracted to the ripe breadfruit.

[512] During the survey, however, most hunting was done during period III when 4.8 hours per man-week were recorded, the avowed object being to 'stockpile' smoked meat for the annual Christmas feast held on Sasembata mission station. Large intra- and inter-village group drives were organised daily for two weeks, the activities being initiated by the priest blessing the dogs. Wallabies were the principal animals caught. During both weeks time spent hunting exceeded 11 hours per man-week, or more than that devoted to taro gardening. These drives were facilitated by a spell of unusually 223 dry weather.
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Sago-making is a highly seasonal activity. In Sivepe, production [22] is confined primarily to the dry season when 1.5 hours per man-week [512] were spent on it, rising to 6.4 hours in week 16 when only taro [461] gardening, among subsistence activities, was of greater importance. The work is arduous and is only undertaken with reluctance as the flour must be produced as quickly as possible following the felling of the tree. It is one of the few activities not interrupted by heavy rain.

[46] Because of the very high labour requirements, sago-making is essentially a group enterprise and, not being popular, is only commenced when a number of families have little producing food in their

[TEXT CONTINUED ON PAGE 87]

461 the principal source of cash, where the returns to labour are relatively low.[1] Here families of procreation and orientation often form a single work group where parents, without cash crops of their own, are called upon to assist their children. The work groups are largest (2.9 persons) for pulping where the crude methods used are especially inefficient. The marketing of rubber involves work groups of a mean size of 1.9 persons since the product has a higher weight-value ratio than coffee and is also bulkier.

A relationship appears to exist between the 'hardness' of the work (in terms of energy expenditure and the capacity of one person to handle it) and the size of the work group. The affiliation of members of such groups is extremely varied and appears to be based largely on considerations of residence as it is exceptional for members of a Sivepe-initiated work group to be drawn from outside the village.

Apart from the activities described there is a variety of communal tasks initiated by an external agency and there are others which apparently originate elsewhere but operate through an agent within the village. Establishment of the communal cash crop garden and the pre-Christmas hunting drives both fall within this latter category and work groups exceeding twenty people were often associated with them. Of the two, the hunting drives were most successful since the type of organisation and techniques used were essentially traditional - beaters drive the game towards a long staked net where they are speared by the netsmen.

[224]

[476] Because of relative unfamiliarity with most forms of co-operative effort, communal activities initiated by the external agencies generally prove unsuccessful. Where they are customary, as in sago-making, an immediate return against assistance rendered is frequently obtained. No such immediate or tangible returns are associated with many of the communal activities initiated by the external agencies.

The activity patterns of selected individuals

128 The preceding pages have been concerned with a strictly quantitative analysis of the behaviour of a population of 35 adults. Here closer consideration is given to six individuals, representing a range of 'types', with the object of exploring possible relationships between work and the more qualitative factors of family, status, values and aspirations.

159 554 Linton. The main material criteria used in assessing individual status are diligence in work, generosity, wealth in terms of both cash and traditional valuables (di-hambo) and abundance of yams. By all these standards Linton ranks very highly in the village.

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[1] See p.292. A 4

A, [See Category 433, p.292--Analyst]

554 Only occasionally do his monetary aspirations appear openly to conflict with customarily defined Orokaiva behaviour. Two such cases may be instanced.

432 While the practice of 'marketing' pigmeat is becoming increasingly common among the inland Orokaiva, initially to 'strangers' by hawking around villages or selling it at Saiho market, it is also beginning to operate among kinsmen at the intra-village level. 'Marketing' normally follows the unpremeditated killing of a pig, as in the case of one having broken into a garden. Two cases occurred in Sivepe during the year, one organised by the village councillor and the other involving a pig of Linton's. While Linton shot the pig himself and decided to 'market', at the last moment he left the village and another member of Timumu clan cut it up and sold it, giving all the proceeds to Linton's mother.
[431] In a third case Linton had decided to distribute the legs as hande[1] but market the body. Again at the last moment he changed his mind and made hande with all the meat.

472 Linton faced a similar conflict between custom and cash in his hunting activities. As
224 the owner of a shotgun he did a great deal of hunting, particularly in the dry season, formulating a business arrangement with non-kinsmen from other villages whereby he would
[571] hunt on their behalf if they provided the cartridges and a cash payment of 10c with each cartridge. In return he guaranteed a flying fox for each cartridge. By such a restriction of entrepreneurial activities to people outside the 'sympathy group'[2] an effective compromise is achieved between customary values and commercial aspirations, and individual security founded on reciprocal exchange among kindred is not impaired.

554 Linton's status in the community, and the diversity of his interests and loyalties, is manifested by his being the most active person in the sample.[3] With a mean activity week of 52.9 hours he distributes his efforts throughout the range of activities (with the exception of household and sickness which are predominantly the concern of women) leaving little time for informal socialising.

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1 Hande: a prestation where subsequent reciprocation is expected.

2 i.e. the group 'to which the individual feels he owes allegiance; he gives them his sympathy, and from them he expects to receive sympathy; and their limits are the limits of his intra-group morality' (Williams 1930:310). For a lengthy discussion of the concept see Williams 1930:308-35. See also Lawrence's discussion (1967:101-5) of the 'security circle', an analogous concept.

3 With the exception of the girl in full-time employment at Sasembata clinic.

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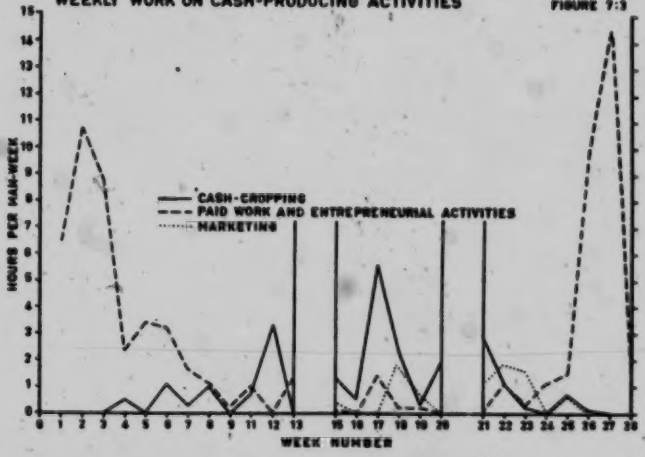
INONDA
WEEKLY WORK ON CASH-PRODUCING ACTIVITIES

FIGURE 7:3

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[411]
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The gathering of forest plants receives more attention during the dry season to compensate for lower garden production. The increased dietary significance of such plants at this time is, perhaps, understated in Table 7:3, since women often collect green leaves beside paths while walking to or from other activities and such gathering may not be recorded. In addition, a considerable amount is gathered by children. Hunting also increases during the dry season, with the increased number of wild pigs. However, a significant factor in 1964 was the acquisition of a shotgun in July by the leading man (with financial assistance from others, who thereby acquired rights of use). From this time, hunting to obtain meat for both food and marketing increased, becoming most popular during period III when marketing also was most frequent. Due to the drop in water levels, the time devoted to fishing during the dry season is much less than in the rest of the year, but over the year as a whole, more time is spent in it than in any other single activity.

8: Waddell & Krinks E-4,5 (1964-1965) 1968 QJ23 Orokaiva QJ23



then sweet potato and minor crops. After the Mt Lamington eruption, several rivers flooded and, with the exception of Mamoko's, all the Inonda people's yam gardens were destroyed. The supply of yams has gradually been increased from those surviving in his garden, but he and his sons are still the only people with large holdings. Mamoko spends a considerable amount of time assisting others in subsistence activities; in particular, he cleared and maintained a sweet potato garden on behalf of the widow and also helped her in fencing, in erecting a yam storage house and in constructing her house on the new village site. He also spent 30 hours helping his son to make sago. His eldest son's wife and the widow often harvest in his gardens and cook for him. Among his other food-producing activities he spends 2.5 hours a week on hunting, using a spear and accompanied by his son's dog; he usually gives the produce to his son's wife.

Mamoko was never absent from the village for a whole day, but spent 10 days inactive through sickness. Largely because of this, he was unable to attend a number of feasts and spent less time than anyone else in this way. Like most of the men, he spends little time on council work; this and other activities related to external agencies and the monetary sector account for only 4 per cent of his time. In other words, his activities are now almost wholly subsistence-oriented, although he maintains an interest in and encourages others to plant cash crops.

Embogi. A widow aged about 51, Embogi was born in Urio village and retains close links with her kin there. Her first and second husbands, who were brothers, belonged to a subordinate branch of the main lineage in Inonda. Her third husband, who had one other wife living, died in 1962. She has a son and a daughter from this last marriage, and has remained in Inonda partly to maintain her youngest son's rights to land inherited from his father. She maintains a separate household with these two children but in August her eldest son and his wife (Marjorie) moved in with her prior to building their own house on the new village site. Embogi's second son (by her second marriage) normally lives with her but for most of the survey was staying with a classificatory father while attending the administration school at the settlement block. Her house was built mostly by this son and Mamoko, the eldest son being absent at the time at his wife's father's funeral feast in Hisherita.

Although Embogi's working week is considerably longer than Mamoko's, it is shorter than that of most others. However, 80 per cent of her time is devoted to productive

of each in the food pattern, the proportion of total production of goods entering into the distributive system varies considerably, being related to both its degree of scarcity and the circumstances of the exchange.

Taro, being the staple food, is normally readily available to all households from their own resources and it is estimated that only about 4 per cent of total production enters into distribution.[1] Of this figure over half (56 per cent) circulates within the village, usually in the form of individual plates of cooked food distributed after the evening meal is prepared. These evening distributions are initiated by the first to prepare their meals, and offered to those returning later to help allay hunger until their own food is ready. While the principle of reciprocation applies on such occasions individual exchanges are not accounted for. This applies equally to areca, lime and pepper which are casually distributed at gatherings.

Of foods which are resorted to in the dry season, particularly sago and breadfruit, a much higher proportion of total production enters into circulation. Well over half the sago produced is distributed, specifically to compensate for assistance rendered in its working, but more generally in recognition of the general scarcity of food and of an obligation among those endowed to share their stocks with the less fortunate. Even in such instances, however, the manner in which it is distributed stresses particular relationships.

Custom requires that an individual should not eat the meat of a pig which he has reared himself or of wild game which he has caught. Consequently virtually all meat 'produced' enters into the exchange network, the only observed exception occurring when a pig breaks into a garden and the owner endeavours to kill it himself. Even in

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[1] This figure was determined by using yield data gathered in Sivepa during 1961-62 by the FAO Survey of Indigenous Agriculture. It was estimated that 159 persons produced 298.1 tons of taro in one year from 51.4 acres. Assuming the acreages to be constant the FAO survey estimates an individual requirement to be 0.34 acres per annum and Rimoldi (1966:20) estimates 0.36 acres - a yield of 3.3 tons per acre is obtained. (This includes area under other crops, but taro accounts for 80 to 90 per cent of the total acreage and it is assumed this proportion is constant.) Thus one individual produces 1.87 tons from 0.34 acres.

Using the ratio 70:36 of adult to individual acreage (Rimoldi 1966:19) an adult produces 3.63 tons from 0.66 acres. The present survey covered 4,741 adult-days (man-days) or 12.9 adult years. A yield of 46.8 tons was therefore obtained. During the same period 1.9 tons of taro - 4.1 per cent of total production - was disposed.

[TEXT CONTINUED ON PAGE 187]

such cases much of the meat is distributed. However, if an individual wishes to organise a pig-feast he normally arranges an initial exchange of pigs with another person (frequently with one to whom he had previously given a piglet to look after until it matured), only killing and preparing the pig so received. Similarly, when a number of people are hunting together, whoever catches anything will immediately make a gift of it to another member of the party.

A small proportion of all transactions comprises goods given in charity to the old and infirm, one item falling specifically in this category being firewood. In such cases no return is expected.

(ii) Labour services. Of the sample's activity time, 3.9 per cent was directed to rendering labour services, almost all of which were on a non-monetary basis. As with subsistence produce an overall balance is registered but, since assistance is frequently reciprocated in the form of gifts of food, this fact conceals substantial internal variations within the sample. Of labour services acquired, 55 per cent were directed to two men: Umbahapa, the oldest person and a widower living alone, and Linton, the most active and highly regarded of the men,[1] while eleven individuals received no assistance whatsoever. By contrast all but one individual gave some assistance to a member of another household and no one person accounted for more than 12 per cent of all assistance rendered.

Similarly, as demonstrated by data on the composition of work groups,[2] the range of activities over which labour services are exchanged is very restricted. Eighty-eight per cent fall within the subsistence sector and of these over half occur in construction and sago-making. Among cash cropping activities assistance is commonly provided only in the pulping and washing of coffee (see Fig.10:1). Such services are therefore largely confined to activities where, firstly, the labour resources of the nuclear family are normally inadequate for their effective completion, as, for example, construction and sago-making and, secondly, immediate compensation is expected, as, again, in sago-making, in harvesting yams, helping with the exchanging and butchering of pigs, and hunting.

(iii) Storebought goods. While products of the external sector circulate through the gift exchange system, acquisitions predominate and comprise 88 per cent of the total volume transacted. Goods received from the researchers apart, most derive from relatives currently residing outside the subsistence village context - either as settlers at Sangara or in wage employment. The data incorporate

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1 For a detailed account of the activities of these two men, see pp.117-21, 126-7.

2 See pp.114-17.

A, [See Category 5[illegible], pp. 117-119; Category 461, pp. 120-121; Category 512, pp. 126-127--Analyst]
B, [See Category 461, pp. 114-117--Analyst]

## Chapter 11

## Exchange patterns: Inonda

437 [431]

### The nature and volume of transactions

The Inonda people carry out exchanges of subsistence produce, labour services and items derived from trade stores not only with each other but also with people from other villages, with settlers and with kinsmen or friends who are wage earners. Reciprocation for a gift is not necessarily on the same occasion, or in the same quantity or of the same item. The exchanges effected by the 21 adult members of the village were recorded simultaneously with the data on activity patterns, a total of 2,782 man-days being covered.

(a) Non-monetary sector

438 [262]

(i) Subsistence produce. Table 11:1 shows the total amounts of each item given and received by the villagers in all non-monetary transactions. The dominant position of taro in the horticultural system and the diet is emphasised by its role in exchanges. The economic importance of the sparsely-populated grasslands and hill areas is also clear from the fact that wild pig is the next most important item after taro; other hunted produce and fish are also significant. Some allowance should be made for the fact that pig carcasses, weighing up to 200 lbs are often given whole rather than after the removal of the gut and bones.[1] In addition, portions of meat frequently pass through a 'chain' of exchanges and are thus counted several times. This process occurs more rarely for vegetable produce. These qualifications, however, are not sufficient to diminish the significance of pigmeat in the exchange pattern. Sweet potato is the second most important crop (see Table 4:9) and the third most important item in subsistence transactions. Banana, sugar-cane, yam and pumpkin are the main subsidiary crops and are also significant in the exchange pattern. The comparatively small

[224]

[1] This practice is determined partly by the belief that in certain circumstances, such as when using a new gun, spear or new hunting dog, a hunter should not keep the prey to himself.



[TEXT CONTINUED ON PAGE 230

241 to Inonda men, and his three son-in-laws assisted him to make the garden, which covered an area of 2.32 acres.

241 Fencing: Wild pigs living in the nearby forest are always a menace to the food crops and the people erect fences and set traps to protect their gardens. The first panel of a fence is built where the people consider that pigs are most likely to enter the garden (usually the side facing the forest). Often, no further fencing is done until a pig enters the garden through an unfenced area. Then another panel may be built and this sequence is continued until the garden is almost pigproof. Natural barriers such as steep-sided creeks and large fallen trees are incorporated into the fences whenever possible. Households with neighbouring gardens often work at the same time (but independently) in order to reduce the amount of fencing required to surround the garden area.

[462] All members of the household help with fencing but most of the heavy work is done by men. Straight green saplings about two inches in diameter are cut into stakes six feet long and thrust into the ground in pairs about nine inches apart with two feet between pairs. Logs of up to six inches in diameter are then either brought from the garden where they have been stacked after clearing, or are cut from the forest. They are piled horizontally between the pairs of stakes to a height of four to five feet, and the stakes are lashed together with wagesi vine to hold the logs in place. The warm moist climate causes fences to decay rapidly but they usually remain effective for about a year, by which time all but the latest-maturing garden products have been harvested.

● 244 Hunting, fishing and foraging: Inonda is more fortunate than many Orokaiva villages in that it has few people and extensive hunting lands. In fact the greater part of the total land area is used only for hunting and foraging. During the first month of our stay, ten wild pigs were speared or shot - a considerable quantity for a village of eight households. In addition, birds, bandicoots and other game were killed. One of the villagers owns a gun which he makes available to others and this has in all probability reduced the time spent in hunting and at the same time increased the product. [411]

224 Snares and traps are set at strategic points to catch wild pigs. A snare consists of a wire noose attached to a sapling which is fastened under tension to a triggering device. Snares are usually concealed along paths in abandoned gardens. The traps are of two types: the pit-trap which is dug two to three feet deep along a path or near a hole in a fence and has old spear heads and sharpened hardwood stakes "planted" in the floor; and the jump-trap which consists of hardwood spikes set at an angle in the ground with the points facing a low "gate" in the fence, so that a pig which jumps the "gate" impales itself on the spikes.

226 There is some fishing in the local rivers throughout the year, but most fish are caught during the dry season when 222 the rivers are low and the water is clear, and spearing is then easy and profitable. The people forage for firewood, wild yams, bush cabbage, honey and other foods. Although these products may make an important contribution to diet, they seem to provide only a small proportion of the total volume of food consumed.

131 Boundaries: The external boundaries of the Inonda lands are known in detail where they follow or cross the Sambogo and Girua rivers, and where they cut the main road. Elsewhere the people recognize only general boundaries which follow hill-tops or other natural features. Within Inonda the Girua and Sambogo rivers and their tributary creeks form the most important boundaries and each area of land is known by some physical feature, frequently the name of the adjacent creek. On the southern side the land extends back into the mountains in some cases to include the whole watershed of the creeks which feed the Sambogo, and in others to meet the boundaries of the Mosou and Tandai'undi lands.

241 Each of the lands framed by the creeks is divided 423 between the lineages. Boundaries are marked by trees (especially hauga and poponda) and other natural features. The gardens of different families and of different individuals within families are marked, sometimes by rows of crotons, but more usually by continuous lines of dead saplings laid end to end between trees or stumps. Individual gardens are not named but are referred to by the name of the person who plants them.

only permissive rights at Inonda or any nearby place. He has been living at Inonda for some years on a temporary basis and is dependent for gardening land on his relatives by marriage at Inonda. He has also been loaned two pieces of gardening land at Hohota, where he used to conduct a church school, and is obliged to accept whatever land is made available to him. One of his gardens in Hohota is planted on land held by his mother's sister's husband's brother's son, and the other on the land of a senior deacon of the Hohota church.

Two other gardens with recognizable boundaries have been made amongst the main block of gardens. One was made in 1960 by an Inonda man who has since died, and the other by a man of the Jegotumo lineage (of the Andiriha clan) who was born in Inonda but now lives in Hohota village. The sub-lineage to which he belongs has rights to at least two areas of Inonda land. It was presumably to affirm his rights that he made a garden on one of these lands, for he does most of his gardening in Hohota, where his lineage has ample land. Inonda folk say that his rights in the Inonda land will 'live' while he or his son work the land and 'visit' the village (i.e. take part in appropriate village activities such as church celebrations, taro festivals, weddings and funerals). If he did not work the land, they say, then his sons (who are still small children) would not be entitled to make use of it.

- Informants claimed that a man in need has the right to make gardens on the land of the mother's brother though this is exercised only if it is within walking distance of the planter's village. The only instance noted was that of a man who began preparing a new garden on his mother's brother's land at Urio just after our survey was completed.

Hunting and foraging rights: Any primary member of the Andiriha and Jego'undi sub-clans in Inonda can hunt or forage on any portion of the Inonda land which is covered with virgin bush, kunai grass, or second growth. Likewise any villager may take such timber or firewood as he needs from the virgin bush, and although it is said that one may also take these

things from any area of second growth it appeared from our observations that people seldom took wood from second growth land other than areas which they themselves had previously planted. Permissive members of the sub-clans exercise the same hunting and foraging rights as primary members.

Contingent members of the Inonda sub-clans (or their husbands in the case of women), are entitled to hunt on Inonda lands, though they are expected to notify the villagers before doing so. Contingent members of the sub-clans do not in fact come to forage. During our stay one contingent member of the Andiriha sub-clan and the husband of another came to hunt on several occasions. Both live in villages within two hours walk of Inonda. It is said that those from further away rarely come, and then only to acquire meat for an important feast.

On rare occasions, when they have inadequate meat for a forthcoming feast which involves the whole clan, clansmen from other villages come to Inonda and make a formal request for permission to hunt there. They remain for several days and hunt with the help of the local people, smoke the meat and then return home. The Inonda people are then invited to partake of the feast in the village which is holding the celebration, and will be given gifts of garden produce on their departure.

Only three Inonda men exercise hunting rights outside Inonda land. The first two are the members of the Jego'undi sub-clan. They were given hunting rights to a piece of land which abuts the Inonda land to the south-east by their mother's brother shortly before his death. He lived in the adjacent village of Urio and had no children of his own. The other Inonda man with hunting rights outside the lands of the sub-clans is the councillor. He is the eldest surviving child of the previous sub-clan leader, and it also may be significant that he has attained a higher standard of education then any other member of the sub-clan. He was given hunting rights to a portion of land which abuts the Inonda lands to the south-west, by his mother's father who was also the man who gave him his name. The donor was an elder of the Tandai'undi clan of Ajoro village and made the

transfer at a feast shortly after the grandson finished his schooling. Along with the rights he was given the obligation to look after the land and ensure that nobody else uses it. In fact, he informs us, the only person whom he permits to hunt there is his adoptive father.

All Inonda people, along with all members of the Andiriha and Jego'undi clans who live elsewhere, claim the right to hunt on the 'ancestral' land at Aramba. This right is in fact seldom exercised, though the Inonda people say that they have paid visits to Aramba on several occasions in recent years to collect fruits and nuts, and have done a little hunting and foraging during their stay.

During the dry season hunting drives are sometimes held on the Inonda grasslands which are burned off for the purpose. As a considerable number of people are needed to undertake such a drive, neighbouring villages are invited to participate in the hunt.

Fishing rights: For the purpose of fishing rights, the Girua river is divided into sections, each of which is associated with a particular local group. Rights to the section running downstream from a point near the Inonda airstrip are held by the people of Doboduru village. From Inonda airstrip upstream to a point near the new Girua bridge, rights are held by the Inonda people. Upstream from the new Girua bridge as far as Hombere creek, rights are held by the Warau'undi clan and thereafter sections are held by the Ajoro, Sewa and Bofu people respectively. The boundary of each section of the river is also the boundary of the surrounding land.

The Inonda portion of the river is held jointly by the Andiriha and Jego'undi sub-clans and any primary member of either sub-clan may fish there. Men who are secondary or contingent members of the Inonda sub-clans, and the husbands of women who are contingent members, have a limited right to fish in the Girua river, for whilee they cannot fish there without

| | Men | Women | Average |
|---|---|---|---|
| 461 221 462 [224] [226] [222] Hunting, fishing and foraging: Taken as 25% below pilot survey (as hunting increased during mourning and fishing increased during dry season; foraging not fully accounted for as often done in the course of other activities). Hunting all by men, fishing mostly by men, foraging mostly by women | 30 | 8 | 19 |
| [342] Housebuilding: House rebuilt about every 4 years. Assuming that it takes about 16 man-days to build a house. | 4 | - | 2 |
| Total subsistence activities: | 74 | 132 | 103 |
| [241] Cash cropping: Assessed time needed to maintain and harvest area planted (1.85 acres) averaged over all adults. | 6 | 6 | 6 |
| Council work: Road work say 4 days per man per year. | 4 | - | 2 |
| Church: Services 2 hours per week, plus church celebrations 2 days per year. | 17 | 17 | 17 |
| Sickness (including caring for the sick): Based on survey period. | 23 | 29 | 26 |
| Paid work: Based on actual paid work undertaken so far this year. | 72 | - | 36 |
| Total other activities: | 122 | 52 | 87 |
| Social obligations | | | |
| Death: Based on 2 deaths per year in this village, each involving the equivalent of 10 days absence from productive activities; and 5 deaths elsewhere which concern Inonda people involving 3 days each. | 35 | 35 | 35 |

262 The principal food at Ombi-Tara is taro, while other foods of importance include sweet potatoes, yams, bananas and plantain, edible pit-pit (saccharum edule) and a wide variety of leaves and bush cabbages. Bread-fruit, pandanus, betelnuts, coconuts, pine-
[224] apple, pawpaw, watermelon and sugar cane are also eaten. The main sources of animal protein are provided by wild pigs, birds, flying foxes and the occasional cuscus. These add variety but provide
231 comparatively little food. The keeping of domestic pigs in vil-
657 lages has been outlawed for health reasons by the Ilimo Local Government Council which serves Ombi-Tara, but one old man, a former clan leader, kept three pigs under his house.

342 Readily available natural vegetation provides housing materials. Timber is used for the framework and walls, blackpalm or timber for the floor, and thatched sago leaves for the roof. Houses have an average life of about four years.

162 The population of Ombi-Tara by clan and location is presented in Table 8.

Table 8

Resident population of Ombi-Tara by clan and location, January 1966

| Clan | Ombi | | | Tara | | | Blocks | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M* | F* | C* | M | F | C | M | F | C | M | F | C |
| Mumu | 20 | 20 | 56 | 1 | 1 | 2 | 6 | 7 | 13 | 27 | 28 | 71 |
| Kuei | 3 | 3 | 7 | 11 | 8 | 20 | - | - | - | 14 | 11 | 27 |
| Total | 23 | 23 | 63 | 12 | 9 | 22 | 6 | 7 | 13 | 41 | 39 | 98 |

M* Adult males. F* Adult females. C* Children.

[166] [167] [464] Note. In addition there were seven Ombi men and six Tara men absent from the area working for wages, that is, roughly one man away for every three remaining at home.

18: Dakeyne K-5 (1962-1964) 1969
OJ23 Orokaiva OJ23
Yega

482

[Housewife carrying garden produce and firewood back to her village, a distance of up to four miles. Her load, excluding baby, is about 100 pounds.]

# INTRODUCTION

433 THE traditional economy of New Guinea villages was radically different from our own. Whilst our economy is based upon the production of surplus goods which can be sold for profit, thus providing capital which in turn may be invested to produce greater profits, the key note of the New Guinea economy was self-sufficiency. Traditionally, the people of New Guinea were subsistence cultivators planting their food crops in small clearings in the forests and supplementing this food supply by fishing, by hunting the animals which live in the forests and on the grasslands and by gathering the edible produce of wild vegetation, notably sago. Only the simplest implements were available: stone axes with which trees could be laboriously felled or ring-barked; fire for burning-off the mass of felled timber, vines, and leaves; and sharpened sticks with which holes were made for planting seeds and cuttings. In only a few limited areas, notably the central highlands of the main island, was there any attempt at digging or cultivating the soil prior to planting; in most areas cuttings or seeds were planted in holes made directly in the cleared, ash-covered ground. The burned clearing thus made and used for the growing of food crops is referred to in this book as a swidden.

433 24 [226] [224] [222] [412] [302] [128]

433 24 177 [412] [P.I-A]

Such an economy, in which there was no concept of saving and no profit motive, tended to be resistant to change; innovation was unnecessary. But with the coming of white men possessing a superior technology, an important change occurred; steel axes, knives, and spades

18: Dakeyne K-5 (1962-1964) 1969
OJ23 Orokaiva OJ23
Yega

241
419

*Fig. 6.* *A Yega swidden. Notice the variety of interplanted crops which here include maize, taro, sugar cane, pineapple, paw paw, and bananas. The fence, built to keep out wild pigs, is about five feet high*

241 b) *Fencing.* Most Yega swiddens are fenced, at least partly, against the depredations of wild pigs (Fig. 6). Since fencing is a tedious task, natural features such as steep creek banks are utilized as fully as possible. But frequently one finds a swidden entirely fenced except for a gap left purposely to tempt the pig to enter the garden. A trap is then set, or a hunter takes his stand nearby at night. When the gap is not being used for hunting purposes, a fire is lit or pieces of rag are hung there; pigs scenting human beings will not then enter the garden.

[224]
[825]

241 462 c) *Division of labour.* Most garden work is performed by both men and women, but cutting large trees is men's work only, and harvesting is performed by women only. Incidentally, the women also carry the loads of vegetables weighing sixty to seventy pounds back to the villages, often three or four miles, sometimes with a load of firewood and a baby on top.

[482]

262 d) *Sago production.* Sago is an important supplementary food; it is particularly important as a famine reserve. During an unusually long dry period in 1965 the Yega and their neighbours were reduced to living, for some months, almost exclusively on sago. Production

222 is a tedious process. Sago is a starch which, with fibre, makes up the internal bulk of the

[P.9-B]

311 products, such as slow-growing trees, which are used for house
423 posts, drums, and other artifacts. A great deal of Sivepe land is in young bush but this is fallowed garden land. After eight years or so, it grows sizeable trees, and sometimes it is fallowed for much longer. In this bush, many trees may be found that have actually been planted by man and are owned by individuals. Prominent among these are breadfruit, various nut trees, fruit trees and trees with other specific uses. Some of these are
224 deliberately planted in bush. People go to the bush to collect
[222] these, to forage and to hunt. Although hunting expeditions do occur periodically, and cause much excitement, they yield very
[136] little meat. Not only is the area too small to contain much game, but also it appears that very few birds and no game apart from
[411] small marsupials are actually still left. The same is true for the rivers which contain very little fish. I could not help wondering, in fact, whether the meat collected was an adequate
[262] return for the number of cartridges used to kill it. Hunting expeditions occurred only when there was a feast, and when the offering of fresh meat to guests was especially desirable. (Tinned meat might be cheaper than the cartridges but much less esteemed.)

311 In this respect, the situation was very different in Inonda where only a fraction of the land was used for gardening so that almost all of it was hunting land. Most of this was in kunai grass, which was very often burnt over. The effect of these burnings was very often that good garden land also fell a victim to fire, valuable trees were destroyed and villages endangered. The yield
224 in meat was much higher, however, so that in Inonda, meat actually
223 became an economic resource: it was sold on the market and used as gifts in return for feathers and other valuables. There are more birds at Inonda than at Sivepe, more marsupials and also a good chance of an occasional wild pig. Neither at Sivepe nor at Inonda is there evidence today of the use of traditional hunting techniques, though traditional fishing techniques have survived.
[411] The decline in game and fish population is ascribed to the intro-
[293] duction of guns and snorkels which greatly increased yields for some years, but then led to a greater scarcity than had ever been
[199] known in the past. Guns and snorkels were introduced shortly after the second world war.

There are two kinds of domestic livestock: pigs and fowls.
231 The number of pigs has, as I already pointed out, declined greatly in both villages. It was impossible to know how many pigs were owned by Sivepe people in 1966-67, because they disappeared as the old village became deserted and were never seen at all in the new village. Rimoldi reports 24 pigs owned by his sample of 50 Sivepe people alone which suggests that even in 1963, when he stayed there, the whole village must have owned at least 60. During my period of study, only a few of them were killed, and only when

794 organised contact. After each Sunday service, a meeting of the church council is held at the church, presided over by the pastor, at which the needs of the parish are discussed. The pastor may also call [431] meetings during the week. No payment is ever made for work done for the church, but the pastor has on occasion made a small distribution of tobacco, at which the people were very pleased. Much of the burden falls on the member of the church council for each of the villages. [623] While the after-service meetings at the church are open to all church members, the council has its own meetings and the member for the village has an especially close relationship with the church. It is he who calls together the people in the morning when building work is to be done, or who makes other announcements, in the usual way by standing in front of his house in the evening and speaking in the dark, heard by everyone in the houses.

694 This man belongs to the plant emblem group baptised in the early 613 1950's, but interestingly enough he did not, like most of the early converts belong to the Jegase clan. Plant emblem groups (or lineages) 794 are not necessarily segments of a clan and in this case the sasaha plant emblem group includes a few Seho people, who were baptised with the rest of their lineage. It was one of these Seho men who was chosen as church councillor, the choice being reportedly made by the ● [229] pastor himself. Shortly before my arrival in Sivepe, this man was given the office of hunting expert. Previous to this, every clan had had its own hunting expert, but now this church council member was the only one. The task of the hunting expert is the performance of magic prior to a collective hunt, decision of the time and place and the privilege of being the first man who enters the bush, together with his wife, for hunting. "What kind of magic does Dunstan perform?" I inquired. He invites the pastor down to the village and the pastor blesses the guns and other appurtenances of the hunt, while the old magic is no longer performed. In the neighbouring village of Sasembata, I found that this innovation had not been adopted.

794 In Inonda, all religious organisation was in the hands of the 184 transport driver and one-time councillor, who played the role of lay-preacher on Sundays, using as a chapel a building originally intended for the storage of coffee. Church was attended by the Christian half of the village but I saw no Christian activities apart from the weekly service. The mission teachers and the Anglican school were located at Hohota, three miles away from Inonda. Most of the modern organisation roles noted for Sivepe were, in fact, found at Inonda but every one of them was allocated to the same man, the transport driver. He acted as "committee;" he made the kind of speeches that were made in Sivepe by the councillor and the sanitary inspector (these functionaries very rarely came to Inonda); he was middleman for the mission; he was agricultural entrepreneur and his father was the feasting leader, leaving to him the day-to-day organisation of the feast given in June, 1967. The price for this far-reaching centralisation was a lack of participation in most of the activities by at least half the population, whereas participation was far more general at Sivepe.

mingled more freely as a result of travel on the government roads and trails (which they have to keep in order), trading, Mission and official gatherings, and other new opportunities for interpersonal relations. One special feature of Orokaiva life in modern times is the annual burning-off of grasslands by hunting parties in order to get wild game. This has probably involved the assembly of larger groups and is one of the few activities which could induce intersettlement cooperation. The writer sensed the parallel of the crude local fires set for garden clearing and the general burning-off of grasslands to the major burning and blackening in the wake of the volcano—doubtless a mighty job of clearing to the Orokaiva eye.

Within the limits that brief characterizations of personality norms can be valid, observers seem to agree that the Orokaiva as individuals have traits congruent with the social structure that favor individuality and mobility. Even the casual visitor gets a sense of independence, alertness, self-reliance, "strong talking," dignity, restraint, imperturbability at meeting the unexpected event, and high-tension interpersonal behavior in general. This is in particularly striking contrast to such an elaborately structured society as that of Samoa, where the writer had been working shortly before. In informal groups seen around the camps and waiting at airfields for transport, women and children, far from being in the background, kept up a busy verbal exchange with the men. The Administration has considered the Orokaiva territory as perhaps the best recruiting ground for its Royal Papuan Constabulary on the basis of these personality characteristics, including ability to meet crisis conditions such as patrols may encounter.

The Orokaiva religious history is also particularly interesting here. Their traditional faith, Williams says, though in many respects vague and locally variable, concerned itself "primarily with the spirits of the dead" and their influence on the welfare of the living. Death was appraised with particular realism, although it was considered ultimately as the result of supernatural causes. Magic had a consistent place. Orokaiva country, however, has been swept in modern times by a series of new cults indicative of religious adaptability in the face of fresh experience. First to come into prominence was the *Baigona*, or "snake cult" of 1911-12, succeeded from 1914 on by the so-called "Taro cult" which in turn had undergone a series of local reformulations by the time Williams reported on it in 1924.[7] Central features of the Taro cult were association of successful taro cultivation with the ancestral spirits, approached by way of a "shaking-fit" technique of revelation, together with somewhat new types of public ritual and symbols, including fragmentary elements from Christianity. Later Belshaw and others reported that "Christian Co-operative Evangelist" societies, which were developed by the Anglican Mission among some Orokaiva converts for the cooperative growing of rice and other crops, tended to assume a somewhat parallel and absorbing mystical agriculture context. Rumors spread of "an order from the King (of England) that co-operatives

7. *Orokaiva Magic*, Part I; see also Chinnery, E. W. P. and Haddon, A. C., "Five New Religious Cults in British New Guinea," *Hibbert Journal*, 15, 3 pp. 448-463 (1917). Materials are also found in the official reports of the time.

only with reference to a quite novel form of infringement of the taboo—a far more offensive infringement than had ever happened before. Just what made grenades and guns so offensive?

This question may be answered on several levels. The first of these is a purely ritual level. Of all the novel activities in which the Orokaiva engaged near the mountain, the ones that were singled out as significant stood out by making a sharp, loud, and dangerous noise. Now there are many ritual contexts where the Orokaiva use silence as a sign of respect and noise as a sign of disrespect. Hence the Orokaiva were ritually consistent when they told me it was the noise of the hunters' guns that angered Sumbiripa. But hunting rifles have a further symbolic significance that should be taken into account. I was told that game on the mountain was plentiful until the guns were introduced but that today hardly any game is left because the guns killed it all. In this instance the Orokaiva were giving a very reasonable explanation of a drop in game population which was probably real enough. In fact everybody uses guns today or wants to use them, as they are effective for hunting. But they are also sinister—that is, their effectiveness is known to be too great to allow the game population to survive.

The young men who took up the use of hunting rifles between the end of World War II and the time of the eruption were bold innovators and at the same time they were considered slightly wicked in abandoning traditional hunting methods. This is implied by informants who account for the eruption by the anger of Sumbiripa. They are thinking of the breakdown of the old order by the adoption of European innovations, Sumbiripa representing the potency of the old order. They argue that if only the young men had not started to use hunting rifles, the disaster would not have happened. The young men would never have dared to make such a din close to the crater if their respect for the spirits had not been undermined by newfangled doctrines.

The explanation of the disaster considered here resembles all other recorded explanations in one fundamental respect: it is not merely the application of a traditional rule to a new event but it generates a new rule, justifies the rule in the light of empirical evidence, and can be comprehended only in the framework of an ideology which in turn was generated by contemporary events. The starting point of all the explanations is the activity of white officials, missionaries, and traders among the Orokaiva and the